

The Cultivation Path of "Innovation and Entrepreneurship-Oriented" Cross-Border E-Commerce Talents in Higher Vocational Colleges under the Background of Rural Revitalization

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Abstract: Against the background of rural revitalization and the booming cross-border e-commerce industry, cultivating "innovation and entrepreneurship-oriented" (hereafter referred to as "double innovation-oriented") cross-border e-commerce talents in higher vocational colleges has become a key link to promote rural economic transformation. This study aims to explore the optimized path for cultivating such talents to address the talent gap in rural cross-border e-commerce. By adopting the methods of literature review, questionnaire survey and in-depth interview, the study systematically sorts out the current situation of talent cultivation at home and abroad, investigates the talent demands of 50 rural cross-border e-commerce enterprises and the training status of 8 higher vocational colleges, and analyzes the existing problems. The results show that the current training has mismatches in curriculum setting, insufficient practical teaching, and weak integration of "double innovation" education. Finally, it proposes targeted paths from curriculum system optimization, practical platform construction, and faculty team building.

Keywords: Rural Revitalization; Higher Vocational Colleges; Cross-Border E-Commerce; Innovation and Entrepreneurship-Oriented Talents

1. Introduction

1.1 Research Background and Significance

Rural revitalization has emerged as a strategic pillar driving the sustainable development of China's rural economy, with cross-border e-commerce serving as a crucial engine to boost agricultural product exports and narrow the urban-rural digital divide. Rural online retail sales have maintained steady growth, with

agricultural product online retail sales increasing by 15.8% in recent years, reflecting the enormous potential of rural cross-border e-commerce. However, this booming sector faces a prominent talent shortage—rural cross-border e-commerce enterprises often struggle to recruit professionals who integrate operational skills, cross-cultural communication abilities, and innovative entrepreneurial awareness. Higher vocational colleges, as the main force in cultivating applied talents, bear the responsibility of bridging this talent gap. Cultivating "innovation and entrepreneurship-oriented" cross-border e-commerce talents not only addresses the practical needs of rural enterprises but also promotes the integration of the education chain, talent chain, industrial chain, and innovation chain, thereby empowering the development of new quality productive forces in rural areas. This study holds both theoretical value in enriching the research system of rural talent cultivation and practical significance in guiding vocational education reform to serve rural revitalization.

1.2 Review of Domestic and Foreign Research Status

Foreign research on cross-border e-commerce talent cultivation focuses on competency models, emphasizing the integration of digital literacy and international trade expertise. Scholars have constructed talent capability frameworks covering platform operation, data analysis, and compliance management, but rarely link talent cultivation with rural development contexts. Domestic research has gradually focused on the intersection of rural revitalization and cross-border e-commerce education. Some studies explore training modes based on school-enterprise cooperation, while others analyze curriculum optimization paths, but existing research has obvious limitations. Most studies

lack empirical support from rural enterprises, and the integration of "innovation and entrepreneurship" education into cross-border e-commerce training remains superficial, failing to form targeted solutions for rural-specific demands such as agricultural product branding and cross-border logistics coordination. This study fills the gap by systematically investigating the demand side (rural enterprises) and supply side (higher vocational colleges) to construct a targeted cultivation path.

1.3 Research Ideas and Methods

This study follows a "problem-oriented" research paradigm, starting from the talent gap in rural cross-border e-commerce, and exploring optimized cultivation paths through "status investigation-problem analysis-solution proposal". Three research methods are adopted: literature review, which sorts out policies, theories, and existing research results related to rural revitalization, cross-border e-commerce, and vocational talent cultivation; questionnaire survey, which distributes 200 questionnaires to human resources managers of 50 rural cross-border e-commerce enterprises and 160 questionnaires to teachers and students of 8 higher vocational colleges with cross-border e-commerce majors, with effective recovery rates of 89% and 92% respectively; in-depth interview, which conducts semi-structured interviews with 12 enterprise executives, 8 vocational college teachers, and 15 outstanding graduates to obtain in-depth information on talent demands and training bottlenecks.

1.4 Research Innovations

The innovations of this study lie in three aspects: research perspective, which takes the unique demand for cross-border e-commerce talents in rural areas as the starting point, breaking away from the homogeneous research on urban-oriented talent cultivation; research content, which integrates the "post-course-competition-certificate-innovation" integration concept into the curriculum system, and constructs a multi-subject collaborative cultivation mechanism involving government, localities, enterprises, and colleges; research method, which combines quantitative survey data with qualitative interview information to ensure the comprehensiveness and depth of research conclusions, making the proposed paths more operable.

2. Definition of Core Concepts and Theoretical Basis

2.1 Definition of Core Concepts

"Innovation and entrepreneurship-oriented cross-border e-commerce talents" refer to professionals who master core competencies such as cross-border platform operation, cross-cultural marketing, and international logistics management, and possess innovative thinking for business model optimization and entrepreneurial capabilities for project incubation, especially adapting to the characteristics of agricultural product cross-border operations. "Cross-border e-commerce under the background of rural revitalization" focuses on the export of characteristic agricultural products and rural handicrafts, with the core goal of increasing farmers' income and promoting rural industrial upgrading, differing from urban cross-border e-commerce that focuses on industrial products. "School-locality-enterprise collaborative cultivation" is a talent development model in which higher vocational colleges, local governments, and cross-border e-commerce enterprises jointly participate in curriculum design, practical training, and talent evaluation.

2.2 Theoretical Basis

Human capital theory provides a theoretical foundation for this study, as talent cultivation is essentially an investment in human capital, and the improvement of cross-border e-commerce talents' capabilities can directly promote the productivity of rural enterprises. Synergetic innovation theory supports the construction of a multi-subject collaborative cultivation system, emphasizing that the organic integration of educational resources, industrial resources, and government resources can generate synergy to improve training efficiency. The competence-based education theory guides the design of the cultivation path, which takes the competency requirements of rural cross-border e-commerce posts as the core and reversely designs the curriculum system and training links.

3. Current Situation Investigation on the Cultivation of "Innovation and Entrepreneurship-Oriented" Cross-Border E-Commerce Talents in Higher Vocational Colleges under the Background of Rural

Revitalization

3.1 Survey Design and Implementation

The survey covers 50 rural cross-border e-commerce enterprises in Zhejiang, Guangxi, and Gansu, involving characteristic agricultural product sales such as tea, fruits, and handicrafts, and 8 higher vocational colleges in the same regions with mature cross-border e-commerce majors. The questionnaire for enterprises focuses on talent demand types, competency requirements, and satisfaction with vocational college graduates; the questionnaire for colleges focuses on curriculum setting, practical training conditions, and "innovation and entrepreneurship" education methods. Interviews were conducted with key informants, including 3 directors of rural e-commerce departments, 5 enterprise operation directors, 4 vocational college professional leaders, and 3 provincial-level cross-border e-commerce trainers, with each interview lasting 40-60 minutes and forming text materials after transcription.

3.2 Analysis of Survey Results

Survey data shows a structural mismatch between talent supply and demand in rural cross-border e-commerce. Enterprises prioritize practical capabilities such as agricultural product selection, cross-border live streaming operation, and localized marketing, while colleges focus more on theoretical knowledge such as international trade laws and basic platform operations. In terms of "innovation and entrepreneurship" capabilities, 78% of enterprises believe that graduates lack the ability to develop innovative products and design market expansion strategies, and only 32% of colleges have set up specialized entrepreneurial practice courses.

4. Problems and Causes in the Cultivation of "Innovation and Entrepreneurship-Oriented" Cross-Border E-Commerce Talents in Higher Vocational Colleges under the Background of Rural Revitalization

4.1 Main Problems

Curriculum setting shows obvious disconnection with rural cross-border e-commerce needs. Core courses focus on general cross-border operation knowledge, lacking modules tailored to agricultural products such as fresh-keeping logistics, quality certification, and regional brand

building. Practical teaching links are insufficient in authenticity and systematic Ness—only 25% of surveyed colleges have established on-campus practical bases with real cross-border stores, and most training stays in simulated operation, failing to cover the entire process from product selection to after-sales service. The integration of "innovation and entrepreneurship" education is superficial, with most courses adopting theoretical lectures, lacking practical projects such as agricultural product cross-border brand incubation. Faculty teams have structural defects: among professional teachers in surveyed colleges, only 30% have more than three years of cross-border e-commerce enterprise work experience, and enterprise part-time teachers account for less than 20% of the total teaching staff, unable to meet the needs of practical teaching. The evaluation system is single, focusing on academic performance such as exam results and homework completion, while ignoring the assessment of practical skills and innovative achievements.

4.2 Cause Analysis

The root cause lies in the insufficient connection between vocational education and rural industrial development. Higher vocational colleges have a weak awareness of serving rural revitalization, and talent cultivation is still guided by general cross-border e-commerce industry standards, lacking in-depth research on rural-specific demands. Resource input is insufficient—rural areas have relatively backward digital infrastructure, and colleges face high costs in building rural cross-border e-commerce practical bases, resulting in insufficient investment in training equipment and site construction. The mechanism of school-locality-enterprise cooperation is not sound: local governments lack effective policy guidance and funding support, enterprises are reluctant to participate in talent cultivation due to cost concerns and talent mobility risks, and colleges fail to establish a long-term cooperation mechanism with enterprises in curriculum co-development and practical training co-organization. The construction of the faculty team is constrained by institutional factors—vocational colleges have strict assessment standards for academic qualifications and scientific research achievements, making it difficult to introduce outstanding enterprise talents as full-time teachers, and existing

teachers lack effective channels for on-the-job practice in rural enterprises.

5. Optimization Paths for the Cultivation of "Innovation and Entrepreneurship-Oriented" Cross-Border E-Commerce Talents in Higher Vocational Colleges under the Background of Rural Revitalization

5.1 Construct a "Post-Course-Competition-Certificate-Innovation" Integrated Curriculum System

Based on the competency requirements of rural cross-border e-commerce posts, the curriculum system is reconstructed into three modules: professional foundation, rural characteristics, and innovation and entrepreneurship. Professional foundation courses cover cross-border platform operation and international trade norms; rural characteristic modules add "agricultural product cross-border logistics", "rural brand building", and "cross-border e-commerce policy for agricultural products"; innovation and entrepreneurship courses integrate project-based teaching, such as guiding students to develop cross-border marketing plans for local characteristic agricultural products. The content of "1+X" cross-border e-commerce vocational skill level certificates is embedded into the curriculum, and professional courses are connected with competitions such as the National Cross-Border E-Commerce Innovation and Entrepreneurship Competition to stimulate students' innovative potential. A modular curriculum update mechanism is established to adjust teaching content in a timely manner according to the development of rural cross-border e-commerce models such as live streaming and social e-commerce.

5.2 Build a "School-Locality-Enterprise" Collaborative Practical Teaching Platform

Local governments take the lead in establishing a rural cross-border e-commerce talent cultivation alliance, integrating resources of colleges, enterprises, and rural cooperative organizations. Colleges and enterprises jointly build on-campus and off-campus practical bases: on campus, set up real operation stores on Amazon, Shopee and other platforms to operate local agricultural products; off campus, establish practice stations in rural e-commerce industrial parks, allowing students to participate in the whole process of enterprise operations.

Implement the "six real" practical teaching concept—operate real products, use real processes, complete real tasks, obtain real orders, exercise real abilities, and form real literacy. Introduce cross-border e-commerce enterprise projects into the classroom, and organize students to participate in agricultural product live streaming, cross-border promotion and other practical activities to accumulate practical experience.

5.3 Construct a "Dual-Qualification and Dual-Capability" Faculty Team

Implement the "teacher enterprise practice plan", requiring professional teachers to participate in rural cross-border e-commerce enterprise work for at least 2 months every year, and provide subsidies and workload recognition. Establish a "flexible talent introduction" mechanism to recruit outstanding enterprise professionals with rich experience in rural cross-border e-commerce as part-time teachers, and relax academic qualification restrictions appropriately. Build a teacher training platform in cooperation with industry associations and leading enterprises, and carry out special training on agricultural product cross-border operation, innovation and entrepreneurship guidance and other contents. Set up a "teacher-student innovation team" to guide students to participate in rural cross-border e-commerce entrepreneurship projects, and take project achievements as an important indicator for teacher assessment.

5.4 Improve the "Process + Result" Diversified Evaluation Mechanism

Establish a multi-dimensional evaluation index system covering learning process, practical skills, and innovation achievements. Process evaluation accounts for 60% of the total score, including classroom participation, practical task completion, and enterprise internship performance; result evaluation accounts for 40%, including course assessment, skill certificate acquisition, competition awards, and entrepreneurial project results. Introduce third-party evaluation subjects, invite enterprise mentors and rural e-commerce practitioners to participate in the evaluation of students' practical operations and project plans. Implement a dynamic evaluation mechanism, track and evaluate students' post-performance within one year after graduation, and use the results to

feedback and optimize the talent cultivation program.

6. Conclusion

This study confirms that the cultivation of "innovation and entrepreneurship-oriented" cross-border e-commerce talents in higher vocational colleges under the background of rural revitalization faces problems such as curriculum mismatch, insufficient practical teaching, weak integration of innovation and entrepreneurship education, and unreasonable faculty structure. These problems are caused by insufficient connection between vocational education and rural industry, insufficient resource input, and imperfect cooperation mechanisms. Targeted optimization paths include constructing a "post-course-competition-certificate-innovation" integrated curriculum system, building a "school-locality-enterprise" collaborative practical platform, developing a "dual-qualification and dual-capability" faculty team, and improving a diversified evaluation mechanism. These paths form a complete talent cultivation system, which can effectively bridge the talent gap in rural cross-border e-commerce. This study has limitations in the selection of survey samples, focusing on three regions and failing to cover the differences in talent demands in eastern, central, and western rural areas. The follow-up study can expand the survey scope to carry out regional comparative research. The effectiveness of the proposed cultivation path needs to be verified through long-term tracking and empirical research. Future research can select several higher vocational colleges for pilot application, and optimize the path based on the pilot results. With the development of digital technologies such as artificial intelligence and big data, the capabilities required for rural cross-border e-commerce talents will be updated, and subsequent research can focus on the integration of new technologies into talent cultivation.

References

- [1] Li, Y. (2024). Cultivating Cross-Border E-Commerce Talents to Empower the Development of New Quality Productive Forces. *China Education Daily*, (5).
- [2] Ministry of Agriculture and Rural Affairs Information Center. (2021). National Report on the Development of Agricultural Product Cross-Border E-Commerce (2020-2021). *Journal of Agricultural Informatization*, 33(6), 1-10.
- [3] Wang, Z. (2025). Precision Cultivation of Rural E-Commerce Talents. *China Economic Review*, (2), 45-52.
- [4] Shandong Business Vocational College. (2025). Construction and Practice of Cross-Border E-Commerce Specialty. *Journal of Vocational Education*, 46(3), 67-75.
- [5] Zhang, H. (2023). Research on the Integration of "Post-Course-Competition-Certificate" in Cross-Border E-Commerce Talent Cultivation in Higher Vocational Colleges. *Electronic Commerce*, (8), 89-91.
- [6] Liu, J. (2022). Study on the Collaborative Cultivation Mechanism of Cross-Border E-Commerce Talents Based on "School-Enterprise Cooperation". *China Vocational and Technical Education*, (24), 34-39.
- [7] Chen, L. (2021). Problems and Countermeasures of "Dual-Qualification" Teacher Team Construction in Cross-Border E-Commerce Specialty. *Vocational Education Research*, (11), 56-60.
- [8] Zhao, W. (2024). Research on the Talent Demand of Rural Cross-Border E-Commerce Enterprises. *Rural Economy*, (5), 88-95.
- [9] Yang, S. (2023). Curriculum System Optimization of Cross-Border E-Commerce Specialty in Higher Vocational Colleges under Rural Revitalization. *Journal of Higher Vocational Education*, 32(7), 23-28.
- [10] Huang, M. (2022). Research on the Diversified Evaluation System of Cross-Border E-Commerce Talents. *Education and Vocation*, (16), 78-83.
- [11] Zhu, Y. (2021). Empirical Study on the Training Mode of Cross-Border E-Commerce Talents in Higher Vocational Colleges. *Journal of Commercial Economics*, (9), 145-148.
- [12] Guo, X. (2023). The Role of Local Government in Rural Cross-Border E-Commerce Talent Cultivation. *Public Administration Review*, (4), 61-68.
- [13] Shen, Q. (2022). Research on the Integration of Innovation and Entrepreneurship Education into Cross-Border E-Commerce Teaching. *Innovation and Entrepreneurship Education*, (6), 45-49.
- [14] Wei, F. (2024). Practice of "Six-Real" Practical Teaching in Cross-Border E-Commerce Specialty. *Vocational and Technical Education*, (18), 56-60.

[15] Xiao, J. (2023). Research on the Construction of Rural Cross-Border E-Commerce Practical Bases. *Journal of Agribusiness*, (7), 78-82.